AMENDMENTS TO THE CLAIMS

Claims 1-9 (Cancelled)

10. (Previously Amended) The device of claim 12 wherein the top surface of the base contact lies in substantially the same plane as the top surface of the emitter contact.

11. (Previously Amended) The device of claim 12 wherein the base region has a first conductivity type, the emitter has a second conductivity type, and the base extender has the first conductivity type.

12. (Previously Amended) An electrostatic discharge device formed in a first semiconductor material, the device comprising:

a collector region of a first conductivity type formed in the first semiconductor material;

a base region of a second conductivity type formed in the collector region;

an emitter formed on the first semiconductor material on the base region, the emitter having a top surface and a width;

a base extender formed on the first semiconductor material on the base region, the base extender being formed from a second semiconductor material that is different from the first semiconductor material;

a layer of dielectric material formed on the first semiconductor material on the base region;

an ohmic emitter contact formed through the dielectric layer, the emitter contact having a top surface, contacting the top surface of the emitter, and having a width that is greater than the width of the emitter; and

an ohmic base contact formed through the layer of dielectric material, the base contact having a top surface, contacting the top surface of the base extender, being electrically connected to the base region, and having a width that is less than the width of the emitter contact, the ohmic base contact being formed from a third semiconductor material different from the second semiconductor material.

13. (Previously Amended) The device of claim 12 wherein the emitter and the base extender are polysilicon.

14. (Previously Added) An electrostatic discharge device formed in a semiconductor material, the device comprising:

a collector region formed in the semiconductor material;

a base region formed in the collector region;

an emitter formed on the semiconductor material on the base region;

a base extender formed on the semiconductor material on the base region;

a layer of dielectric material formed on the substrate material on the base region;

an emitter contact formed through the dielectric layer, the emitter contact having a top surface and contacting the top surface of the emitter;

a base contact formed through the layer of dielectric material, the base contact having a top surface and contacting the top surface of the base extender; and

a heat sink contact formed through the layer of dielectric material, the heat sink contact having a top surface and contacting the top surface of the base.

15. (Previously Added) The device of claim 14 wherein the top surface of the base contact lies in substantially the same plane as the top surface of the emitter contact and the top surface of the heat sink contact.

16. (Previously Added) The device of claim 14 wherein the base region has a first conductivity type, the emitter has a second conductivity type, and the base extender has the first conductivity type.

17. (Previously Added) The device of claim 14 wherein the emitter and the base extender are polysilicon.

Claims 18-19 (Cancelled)

20. (Previously Added) The device of claim 14 wherein the heat sink contact has a single electrical connection, the single electrical connection being to the base region.

21. (Previously Added) The device of claim 14 wherein the heat sink contact includes a plurality of metal layers.

22. (Previously Added) The device of claim 14 wherein
the layer of dielectric material has a thermal conductivity; and
the heat sink contact has a thermal conductivity that is substantially greater than the thermal conductivity of the layer of dielectric material.

23. (Previously Added) The device of claim 12 and further comprising a first trace formed on the layer of dielectric material and the emitter contact.

24. (Previously Added) The device of claim 23 and further comprising:
a second layer of dielectric material formed on the first layer of dielectric material and the first trace;

a via formed through the second layer of dielectric material to make an electrical contact with the first trace; and

a second trace formed on the second layer of dielectric material to make an electrical contact with the via.

25. (Previously Added) An electrostatic discharge device formed in a first semiconductor material, the device comprising:

a collector of a first conductivity type formed in the semiconductor material;

a base of a second conductivity type connected to the collector;

an emitter of the first conductivity type connected to the base, the emitter having a top surface and a width;

a layer of dielectric material formed over the base;

an ohmic emitter contact connected to the layer of dielectric material and the emitter, the emitter contact having a top surface and a width that is greater than the width of the emitter; and

an ohmic base contact connected to the layer of dielectric material, the base contact having a top surface, being electrically connected to the base, and having a width that is less than the width of the emitter contact.

26. (Previously Added) The device of claim 25 wherein the top surface of the emitter contact and the top surface of the base contact lie substantially in a same plane.

27. (Previously Added) The device of claim 26 and further comprising a base extender formed on the base, the base extender being formed from a second semiconductor material that is different from the first semiconductor material, the ohmic base contact being formed from a third semiconductor material different from the second semiconductor material.

28. (Previously Added) An electrostatic discharge device formed in a semiconductor material, the device comprising:

a collector of a first conductivity type formed in the semiconductor material;

a base of a second conductivity type connected to the collector;

an emitter of the first conductivity type connected to the base;

a layer of dielectric material formed over the base;

an emitter contact connected to the layer of dielectric material and the emitter; the emitter contact having a top surface;

a base connector connected to the layer of dielectric material and the base, the base connector having a top surface; and

a heat sink contact connected to the layer of dielectric material and the base, the heat sink contact being spaced apart and electrically isolated from the base connector, having a top surface, and contacting the top surface of the base.

29. (Previously Added) The device of claim 28 wherein the base connector includes:

a base extender connected to an isolation region and the base region; and

a vertical base contact connected to the base extender and the layer of dielectric material.

30. (Previously Added) The device of claim 28 wherein the top surface of the emitter contact, the top surface of the base connector, and the top surface of the heat sink contact lie substantially in a same plane.

31. (Previously Added) The device of claim 28 wherein:

the layer of dielectric material has a thermal conductivity; and

the heat sink contact has a thermal conductivity that is substantially greater than the thermal conductivity of the layer of dielectric material.

32. (Previously Added) The device of claim 28 wherein the heat sink contact has a single electrical connection, the single electrical connection being to the base.